

REMARKS

The present invention relates to a processing aid for vinyl chloride based resin and a vinyl chloride based resin composition using the same, and more particularly to a processing aid for calender molding, which provides an effect of promoting gelation during calender molding of vinyl chloride based resin without damaging properties that the vinyl chloride based resin originally has, and can eliminate generation of ungelled products of a calendar sheet that are problematic in calender molding and flow marks that can hardly be eliminated by conventional processing aids, and also improves releasability of sheets from roll metal surfaces during calender molding, a vinyl chloride based resin composition for calender molding using the same, and a method of producing moldings using the same.

The rejection of Claims 1-5 under 35 U.S.C. §102(b) as anticipated by or, in the alternative, under 35 U.S.C. §103(a) as obvious over, JP5-140395 (JP '395), is respectfully traversed. JP '395 disclose a vinyl chloride-based resin composition obtained by adding a combination of two methylmethacrylate-butylacrylate copolymers, and one methylmethacrylate-butylacrylate-butylmethacrylate copolymer. The first copolymer has a molecular weight of 1,600,000-2,000,000 and a methylmethacrylate content of 82-90% by weight; the second copolymer has a molecular weight of 100,000-500,000 and a methylmethacrylate content of 55-61% by weight; and the third copolymer has a molecular weight of 250,000-650,000, and a methylmethacrylate content of 54-60% by weight. JP '395 neither disclose nor otherwise suggest the presently-claimed invention, because the minimum methylmethacrylate content in any of their three copolymers is not less than 54% by weight. There is no disclosure or suggestion therein to use a lower percentage amount of methylmethacrylate in any of their three copolymers. Thus, JP '395 do not disclose or suggest presently-recited copolymer (B).

Nor does the disclosure in JP '395 that their composition is for calendering and exhibits no flow marks mean that any of their copolymers has a molecular weight distribution under 3. Since JP '395 requires three separate copolymers, it may very well be that the properties obtained by JP '395 are due to the presence of these copolymers, and not any particular molecular weight distribution.

For all the above reasons, it is respectfully requested that the rejection over JP '395 be withdrawn.

The rejection of Claims 1-5 under 35 U.S.C. §102(b) as anticipated by or, in the alternative, under 35 U.S.C. §103(a) as obvious over, JP60-139739 (JP '739) in view of U.S. 4,668,740 (Okano),¹ is respectfully traversed. JP '739 discloses a composition comprising 50-95 parts by weight of a particular vinyl chloride type resin, 4-49 parts by weight of a methylmethacrylate type polymer having a reduced viscosity of 0.05-2 dl/g, and consisting of 75-100 wt.% of methylmethacrylate, and 1-15 parts by weight of a methylmethacrylate type polymer having a reduced viscosity of 2-18 dl/g, and consisting of 65-100 wt.% of methylmethacrylate. JP '739 neither discloses nor suggests the presently-claimed invention, since, even if the reduced viscosity ranges overlap the presently-recited molecular weight ranges, on which the Examiner relies on Okano, JP '739 neither discloses nor suggests a methylmethacrylate type polymer having a methylmethacrylate component amount overlapping the presently-recited amount for copolymer (B).

¹That the new prior art is not listed in the statement of the rejection is irrelevant; reliance thereon is all that is necessary. "Where a reference is relied on to support a rejection, whether or not in a 'minor capacity,' there would appear to be no excuse for not positively including the reference in the statement of rejection." *In re Hoch*, 166 USPQ 406, 407 n.3 (CCPA 1970). See also MPEP 706.02(j).

For all the above reasons, it is respectfully requested that the rejection over JP '739 in view of Okano be withdrawn.

The rejection of Claims 1-5 under 35 U.S.C. §103(a) as unpatentable over JP '795 or JP '739, in view of JP6-240086 (JP '084), is respectfully traversed. The Examiner relies on Tables 1 and 2 of JP '086 as disclosing the importance of ensuring the Mw/Mn value for polyvinylchloride processing aids to be kept under 3. Even if JP '395 inherently has such a molecular weight distribution, JP '086 does not remedy any of the above-discussed deficiencies in JP '395 and JP '739. In JP '086, only a single, two-stage polymer is used as a processing aid. Moreover, while JP '086 may show the importance of molecular weight distribution for their two-stage polymer processing aid, this disclosure does not demonstrate the importance *per se* of molecular weight distribution for other processing aids.

For all the above reasons, it is respectfully requested that this rejection be withdrawn.

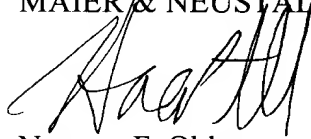
The rejection of Claims 1-5 under 35 U.S.C. §112, second paragraph, as failing to recite what Applicants regard as their invention, is respectfully traversed. The present claims are now outside the scope of Comparative Examples 6 and 10. Thus, there is no longer an issue of whether Applicants are claiming what they regard as their invention. Accordingly, it is respectfully requested that this rejection be withdrawn.

The rejection of Claims 1-5 under 35 U.S.C. §112, second paragraph, as being indefinite, is respectfully traversed. Indeed, the rejection is now moot in view of the above-discussed amendment. Accordingly, it is respectfully requested that it be withdrawn.

All of the presently pending claims in this application are now believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to pass this application to issue.

Respectfully submitted,

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